IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) An intelligent assist device comprising:

an overhead motorized moveable trolley;

a support that extends downwardly from the trolley to a payload;

a sensor operatively coupled to the support to sense a characteristic of motion imparted by a human operator to the device; and

a controller operatively coupled with the sensor and the trolley, the controller controlling movements of the trolley, the controller estimating an amount of oscillation in the support ~~that does not correspond to the motion imparted by the human operator~~ in a higher frequency band and adjusting movements of the trolley based thereon,

wherein the higher frequency band is above a lower frequency band that contains the lowest natural frequency mode of oscillation of the device.

2.   (Original) The intelligent assist device of claim 1, wherein the sensor comprises a cable angle sensor that senses an angle at which the support extends from the trolley.

3.   (Withdrawn) The intelligent assist device of claim 1, wherein the sensor comprises a force sensor that senses a force imparted by the human operator to the device.

4.   (Original) The intelligent assist device of claim 1, wherein the controller filters at least a portion of signals from the sensor that are indicative of the oscillation in the support.

5.   (Original) The intelligent assist device of claim 4, wherein the controller comprises a low pass filter and a band pass filter.

6.   (Original) The intelligent assist device of claim 5, wherein the low pass filter comprises a cut-off frequency of about 0.5 Hz.

7.   (Original) The intelligent assist device of claim 5, wherein the band pass filter comprises a low cut-off frequency of about 1.5 Hz and a high cut-off frequency of about 5.0 Hz.

8.   (Original) The intelligent assist device of claim 5, wherein the controller further comprises at least one rectifier configured to rectify the signals.

9.   (Original) The intelligent assist device of claim 8, wherein the controller further comprises a second low pass filter.

10.   (Original) The intelligent assist device of claim 9, wherein the second low pass filter comprises a cut-off frequency of about 0.5 Hz.

11.   (Original) The intelligent assist device of claim 1, wherein the support comprises a cable.

12.   (Original) The intelligent assist device of claim 1, wherein the support comprises a chain.

13.   (Withdrawn) The intelligent assist device of claim 1, wherein the support comprises a rigid descender.

14.   (Original) The intelligent assist device of claim 1, wherein the motion is imparted by the human operator to the payload and hence to the device through the support.

15.   (Currently Amended) A method for controlling movement of an overhead moveable trolley in an intelligent assist device, the method comprising:

sensing a characteristic of motion imparted by a human operator to the device;

estimating an amount of oscillation ~~in the device that does not correspond to the motion imparted by the human operator~~ in a higher frequency band; and

adjusting movements of the trolley based upon the estimate,

wherein the higher frequency band is above a lower frequency band that contains the lowest natural frequency mode of oscillation of the device.

16.   (Original) The method of claim 15, wherein estimating the amount of oscillation comprises measuring the amount of oscillation in the device that does not correspond to the motion imparted by the human operator.

17.   (Original) The method of claim 15, wherein sensing the characteristic of motion imparted by the human operator comprises sensing an angle at which a payload support extends from the trolley.

18.   (Withdrawn) The method of claim 15, wherein sensing the characteristic of motion imparted by the human operator comprises sensing a force imparted by the human operator to the device.

19.   (Original) The method of claim 15, wherein estimating the amount of oscillation comprises filtering at least a portion of signals generated from sensing the characteristic of motion imparted by the human operator.

20.   (Original) The method of claim 19, wherein filtering the signals comprises passing the signals through a low pass filter and a band pass filter.

21.   (Original) The method of claim 20, wherein the low pass filter comprises a cut-off frequency of about 0.5 Hz.

22.   (Original) The method of claim 20, wherein the band pass filter comprises a low cut-off frequency of about 1.5 Hz and a high cut-off frequency of about 5.0 Hz.

23.   (Original) The method of claim 19, wherein estimating the amount of oscillation further comprises passing the signals through a rectifier.

24.   (Original) The method of claim 23, wherein estimating the amount of oscillation further comprises passing the signals through a second low pass filter.

25.   (Original) The method of claim 24, wherein the second low pass filter comprises a cut-off frequency of about 0.5 Hz.

26.   (Withdrawn) The method of claim 15, wherein adjusting the movements of the trolley comprises reducing a feedback gain when the amount of oscillation in the device that does not correspond to the motion imparted by the human operator exceeds a threshold level.

27.   (Original) The method of claim 15, wherein the motion is imparted by the human operator to a payload and hence to the device through a support that extends downwardly from the trolley to the payload.

Claims 28-34 (Cancelled).

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35.   (New) The intelligent assist device of claim 1, wherein the higher frequency band includes a higher frequency natural mode of oscillation in which the support and the payload swing out of phase with one another.

36.   (New) The intelligent assist device of claim 1, further comprising an overhead rail on which the trolley moves, wherein the higher frequency band includes a frequency associated with a torsional oscillation of the overhead rail.

37.   (New) The intelligent assist device of claim 1, wherein the support and the payload swing in phase with one another in the lowest natural frequency mode.

38.   (New) The intelligent assist device of claim 1, wherein the lower frequency band includes the motion imparted by the human operator.

39.   (New) The method of claim 15, wherein the higher frequency band includes a higher frequency natural mode of oscillation in which the support and the payload swing out of phase with one another.

40.   (New) The method of claim 15, wherein the intelligent assist device includes an overhead rail on with the trolley moves, and wherein the higher frequency band includes a frequency associated with a torsional oscillation of the overhead rail.

41.   (New) The method of claim 15, wherein the support and the payload swing in phase with one another in the lowest natural frequency mode.

42.   (New) The method of claim 15, wherein the lower frequency band includes the motion imparted by the human operator.

43.   (New) An intelligent assist device comprising:
an overhead motorized moveable trolley;
a support that extends downwardly from the trolley to a payload;
a sensor operatively coupled to the support to sense a characteristic of motion imparted by a human operator to the device; and
a controller operatively coupled with the sensor and the trolley, the controller estimating an amount of oscillation in the support in a frequency mode in which the support and the payload swing out of phase with one another, and adjusting movements of the trolley based thereon.

44.   (New) An intelligent assist device comprising:

an overhead rail;

a motorized movable trolley supported by the overhead rail;

a support that extends downwardly from the trolley to a payload;

a sensor operatively coupled to the support to sense a characteristic of motion imparted by a human operator to the device; and

a controller operatively coupled with the sensor and the trolley, the controller estimating an amount of oscillation in the support in a frequency mode associated with a torsional oscillation of the overhead rail, and adjusting movements of the trolley based thereon.